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### REMARKS

Claims 1, 4 through 8, 12,13 and new Claim 14 are pending.

Claim 1 has been amended to reflect that the methods of the invention are advantageously associated with agricultural livestock feedstuff compositions consisting of at least one agricultural livestock feedstuff, sorbic acid and optionally one or more of antioxidants, mineral mixes, vitamin mixes, acid mixes, flavoring products and supplementary feedstuff. Support for this amendment can be found in the Application-as-filed, for example on Page 3, line 29 through Page 4, line 15.

Claim 14 has been added to complete the record for examination and highlight advantageous embodiments of the invention. Claim 14 is generally directed to methods in accordance with the invention in which at least 80 % by weight of the recited sorbic acid has a particle size below 555  $\mu\text{m}$ . Support for Claim 14 can be found in the Application-as-filed, for example on Page 3, line 29 through Page 4, lines 23 through 26.

Applicants respectfully submit that this response does not raise new issues, but merely places the above-referenced application either in condition for allowance, or alternatively, in better form for appeal. Reexamination and reconsideration of this application, withdrawal of all rejections, and formal notification of the allowability of the pending claims are earnestly solicited in light of the remarks which follow.

As a matter of record, Applicant continues to dispute the propriety of the Office's withdrawal of the above-referenced case after issuance of a Notice of Allowance.

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**The Claimed Invention is Patentable in Light of the Art of Record**

Claims 1, 4 through 8, 12 and 13 stand rejected as either anticipated by or obvious in light of United States Patent 4,904,494 to Spanier ("US 494").

It may be useful to consider the invention as recited in the claims before addressing the merits of the rejection. The claims are directed to methods of adding sorbic acid to agricultural livestock feedstuffs as a growth-stabilizing additive. Sorbic acid is generally known as a preservative, as evidenced by US 494. Very recently, sorbic acid in high concentrations has been found to have nutritional activity for rearing piglets, as discussed in the Application-as-filed on Page 2, lines 11 through 25. Conventional wisdom to date has indicated that higher amounts of sorbic acid would induce higher weight gains.

Surprisingly, Applicants determined that agricultural livestock growth rate and feed conversion can be improved over conventional feedstuffs by including fairly moderate amounts of sorbic acid. For example, the addition of 1.0 wt % sorbic acid can provide a growth rate of up to 128 %. This is in sharp contrast to the conventional inclusion of much higher amounts of sorbic acid, such as 2.4 % sorbic acid, which yields only a 123 % growth rate.

Accordingly, the claims recite methods of using sorbic acid as a growth-stabilizing addition to agricultural livestock feedstuffs in which a feedstuff composition is formed by adding from 0.5 to 1.0 % by weight sorbic acid to agricultural livestock feedstuffs. In particularly beneficial embodiments, the feedstuff composition consists of at least one agricultural livestock feedstuff, sorbic acid and optionally one or more of antioxidants, mineral mixes, vitamin mixes, acid mixes, flavoring products and supplementary feedstuff. The recited moderate amounts of sorbic acid result in livestock growth rates as high as 128%, as recited in Claim 12.

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Applicant has additionally determined beneficial sorbic acid particle sizes imparting a more uniform distribution of sorbic acid within the resulting feedstuffs. Accordingly, in advantageous embodiments at least 80 % by weight of the sorbic acid has a particle size below 555  $\mu\text{m}$ , as recited in Claim 14.

US 494 does not teach or suggest the claimed invention.

US 494 is directed to chewy dog snacks that can be stored in non-refrigerated conditions and are easy to prepare. (Col. 2, lines 48 – 53). The chewy dog snacks are in the form of a moldable dough that includes gelatin. (Col. 9, lines 2 – 3; Col. 2, lines 54 – 61; Col. 2, lines 59 – 60 and Col. 6, lines 50 – 52). The gelatin may be present in amounts of up to 30 weight percent. (Col. 5, lines 13 – 14). US 494 emphasizes multiple times within the specification that gelatin is required within the dog snacks, particularly to provide the desired chewiness. (Col. 2, lines 56 – 57; Col. 3, lines 10 – 11; Col. 5, lines 13 – 44).

The dog snacks of US 494 further include any of a number of proteinaceous meaty materials, such as beef, liver or poultry, which are included as taste agents. (Col. 7, lines 1 – 39). The meaty materials are likewise present in amounts of up to 30 weight percent. (Col. 6, lines 65 – 66). US 494 also broadly notes that any of a number of vegetable meals, such as soybean meal, bran or oil may be included within its dog snacks. (Col. 8, lines 59 – 62). The dogs snacks of US 494 also include sugar, in amounts of up to 35 weight percent. (Col. 7, line 53 – 21).

The chewy dog snacks may optionally include any of a laundry list of preservatives. (Col. 8, line 37 – 43). US 494 generically notes that up to 4.0 weight percent of preservative may be incorporated into its dog snacks, with the preferable inclusion of 0.2 to 0.4 weight percent. (Col. 8, lines 34 – 46). Considered as a whole, US 494 generally teaches away from the inclusion of such preservatives, however, as

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they are "not usually needed." (Col. 8, lines 43 – 44). US 494 is silent both as to the physical properties of the preservatives or any distribution issues associated therewith.

Applicant respectfully submits that the claimed invention is patentable in light of US 494. Applicant respectfully notes that the rejection under 35 USC 102 is particularly improper, as each and every element of the claimed invention is not found within US 494. In particular, US 494 does not teach or suggest agricultural livestock. In contrast to the opinion urged within the Office Action.

Applicant respectfully reiterates that US 494 does not teach or suggest the recited method of using sorbic acid as a growth-stabilizing additive, much less a growth-stabilizing additive for agricultural livestock. In fact, US 494, considered in its entirety, teaches away from methods that would include the recited sorbic acid by noting that preservatives are preferably not included within its dog snack compositions.

Applicants further respectfully submit that US 494 most certainly does not teach or suggest the claimed feedstuff compositions consisting of at least one agricultural livestock feedstuff, sorbic acid and optionally one or more of antioxidants, mineral mixes, vitamin mixes, acid mixes, flavoring products and supplementary feedstuff. In fact, US 494 strongly teaches away from such compositions, by requiring gelatin and other various excluded additives to be present in its dog snacks.

Applicant further respectfully reiterates that US 494 most certainly does not teach or suggest methods employing the agricultural livestock feedstuffs recited in Claim 13. The Office Action indicates that US 494 discloses the use of grains. Applicant respectfully disagrees. Grains are defined as the seeds of cereal plants. Such seeds are commonly fed to agricultural livestock that can readily digest such materials. However, US 494 merely generically notes the use of a variety of vegetable meals or bran. Such meals and bran are, by definition, not seeds. Rather, they are processed products, so as to be more easily digested by humans, dogs and the like.

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Consequently, Applicant respectfully reiterates that Claim 13 is clearly patentable in light of US 494.

Nor does US 494 teach or suggest the recited agricultural livestock feedstuffs containing sorbic acid in which at least 80 % by weight of said sorbic acid has a particle size below 555  $\mu\text{m}$ , as recited in Claim 14.

Applicants respectfully reiterate that there would have been no motivation to have looked to US 494. Dog snacks are an altogether different field of endeavour than agricultural livestock feed. The particular problems addressed by US 494 and the claimed invention are also altogether different. US 494 provides dog snack compositions having improved shelf life. The claimed invention increases the growth rate of agricultural livestock.

However, even if one had looked to US 494 (which Applicant submits should not be done) the claimed invention would not result. More particularly, the recited methods incorporating sorbic acid into feedstuffs as a growth-stabilizing additive in a concentration of from 0.5 to 1.0 % by weight would not result. As noted by the Examiner, US 494 generically discloses the use of up to 4.0 % preservative within its dog snacks, with the preferable inclusion of 0.2 to 0.4 % preservative. There would have been absolutely no motivation to have selected the recited range of 0.5 to 1.0 %, as US 494 does not recognize sorbic acid as a result-effective variable in growth promotion. The Examiner's attention is kindly directed to MPEP 2144.05 II (B), citing *In re Antonie*, 559 F.2d 618 (CCPA 1977) (patentability of optimized parameter not previously recognized as result effective variable). Hence there would have been no reasonable expectation in light of US 494 that the recited amounts of sorbic acid would promote growth in livestock.

In fact, based on conventional wisdom, one skilled in the art of livestock production would have instead expected that significantly greater amounts of sorbic

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acid would have been required to promote growth. The Examiner's attention is kindly directed to the Application-as-filed on Page 2, lines 11 through 25 and Page 6, line 27 through Page 7, line 3. The Examiner's attention is also kindly directed to MPEP 2144.05 II (B), citing *In re Boesch*, 617 F.2d 272 (CCPA 1980)(finding patentability in light of prior art suggestion of different balancing of constituents to achieve desired results).

Furthermore, US 494 clearly requires gelatin and various other additives within its dog snacks. Consequently, even if one had looked to US 494 (which, again, Applicant did not) the recited feedstuff compositions most certainly would not have resulted, much less the feedstuffs of Claim 13. In fact, the recited exclusion of gelatin (and other various additives enumerated within US 494) from the claimed invention would render US 494 unfit for its intended purpose. MPEP 2143.01.

In addition, in contrast to the opinion urged within the Office Action, claims drawn to a new method of using an old composition have been found patentable, even though the composition itself could not be patented.<sup>1</sup> US 494 does not teach or suggest the use of sorbic acid for the growth promotion of livestock, much less the recited effective amount. In that regard, the Examiner's attention is kindly directed to *Rohm & Hass Co. v. Crystal Chem Co.*, 722 F.2d 1558, 220 USPQ 289 (Fed. Cir. 1983)(holding that claims drawn to a new method of using an old or obvious composition, in which the method has beneficial effects, have been found patentable) and *In re Shetty*, 566 F.2d 81, 83, 195 USPQ 753, 754 (CCPA 1977)(holding a method of curbing appetite patentable in light of prior art that did not disclose the use of similar compounds to curb appetite, much less a dosage).

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<sup>1</sup> Applicant makes of record that he does not address, infer, or otherwise make any concession as to the patentability of the compositions associated with the above-referenced invention.

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Applicants thus respectfully submit that the claimed invention is patentable in light of US 494.

### **CONCLUSION**

It is respectfully submitted that Applicant has made a significant and important contribution to the art, which is neither disclosed nor suggested in the art. It is believed that all of pending Claims 1, 4 through 8, 12, 13 and new Claim 14 are now in condition for immediate allowance. It is requested that the Examiner telephone the undersigned if any questions remain to expedite examination of this application.

It is not believed that extensions of time or fees are required, beyond those which may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time and/or fees are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required is hereby authorized to be charged to Deposit Account No. 50-2193.

Respectfully submitted,

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### **CERTIFICATE OF FACSIMILE TRANSMISSION**

I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office at facsimile number (571) 273-8300 on July 18, 2005.

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